Abstract

One aspect of the invention is a method of measuring the speed at which a variational gravitational field propagates. The gravitational field relates to a planet, and the planet has object of sufficient mass to change the gravitational field. The method

5   comprises: moving a satellite in orbit around the planet so that it passes over the object; determining the distance L_g that a satellite travels from a predetermined position and a second position that coincides with the moment that the velocity of the satellite changes from the velocity that the satellite was traveling at the predetermined position due to a change in the gravitational field; determining the distance L_{em} that the satellite travels

10   from the predetermined position to a third position that coincides with the moment that an electromagnetic signal to completes travel from the object to the satellite; and calculating the speed of the gravitational field according to the equation:

$$v_g = c \frac{L_{em}}{L_g}$$

where v_g is the speed at which the gravitational field travels and c is the speed of light.

15